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ABSTRACT

This follow-up study, which was part of a larger ongoing longitudinal project, compared early infant-parent attachment relationships to aspects of both parents' and children's mental representations of attachment when children were 6 years old. The sample consisted of 50 mothers, fathers, and children of predominantly upper-middle class social status, and included a high proportion of children who had not been classified as having a secure attachment with mother in infancy. Children's representations were assessed with a modification of Hansburg's (1972) separation anxiety test, which elicits children's verbal responses to pictorial representations of separation experiences. As each picture is presented, the child is asked what the pictured child might feel and do in response to the separation. Results led to the production of a revised and completed version of the Sixth-Year Separation Anxiety classification system. Classification categories include secure-resourceful (Group B), insecure-inactive (Group A), insecure-ambivalent (Group C), and insecure-fearful/disorganized-disoriented (Group D). A significant relationship between Sixth-Year classifications and infant attachment to mother was found, demonstrating the continuity of attachment patterns over the 5-year period. No significant relationship was found between classifications and infant attachment to father. Characteristics of children assigned to the four categories of the classification system are described. (RH)

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Internal Representations of Attachment in Six-Year Olds

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Paper presented at the biennial meetings of the Society for Research in Child Development

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I would like to present the results of a study which attempted to accurately identify, distinguish and classify secure, insecure-avoidant, insecure-ambivalent and insecure-disorganized dyads at 6 years of age based on 6 year olds' verbal responses to imagined separation situations.

This study was part of a larger ongoing longitudinal project directed by Dr. Mary Main. In the first phase of this project, infants 12-18 months of age were seen in the Ainsworth Strange Situation (Ainsworth et al, 1978) with their mothers and fathers. Based on the infant's behavioral response to a particular parent in this brief separation-reunion situation, each infant was classified as secure, insecure-avoidant, insecure-ambivalent or insecure-disorganized in relation to that parent. When the children had reached 6 years of age, we compared early infant-parent attachment relationships to aspects of both the parents and the children's internal working models of attachment.

Fifty mother's, father's and 6 year old children formed the sample of participants in this follow-up study. Social status was predominantly upper-middle class. No subjects had birth complications or were in daycare more than 25 hours per week. The sample was intentionally selected to have a higher proportion of children who had non-B attachment classifications with mother in infancy.

The primary focus of the study was to learn how early security of attachment as estimated from patterns of infant non-verbal behavior relate to both the child's and the adult's mental representations of attachment 5 years later. Current studies have linked individual differences in security of attachment at 1 year to different parent-infant interaction patterns in the preceding year or to later differences in child behavior. Our follow-up study differs in that it involves a a shift away from an empirical approach to the investigation of attachment at the behavioral level to the level of representation.

For my study, I was interested in exploring children's internal representations of attachment figures by examining their verbal responses to line drawings of children undergoing separations

from their parents. I chose to focus on responses to separations, because separation events are recognized among workers in many fields and around the world as a critical event for young children. I also chose to focus upon responses to separation because, according to attachment theorists, children's responses to separation are affected by their expectations of the availability and accessibility of their attachment figures. Based on this line of thought, I reasoned that children's verbal suggestions about how a pictured child would feel about separations might be of interest in shedding light on their symbolic representations of the availability of their attachment figures.

For this purpose, I adapted and altered a separation anxiety test developed by Hansburg (1972) for older children. In this test, children's verbal responses to pictorial representations of separation experiences are recorded. Each child is presented with a series of 6 line drawings of children undergoing separations from the parent.

Show slides of separation situations here

As each picture is presented, the child is asked what the pictured child might feel, and later what the pictured child might do in response to the separation.

All interviews were transcribed verbatim. Based on 12 pilot transcripts of children's verbalizations to the SAT, preliminary rules were developed to differentiate the responses of children who were secure, insecure-avoidant, insecure-ambivalent, and insecure-disorganized with their mother in infancy. After developing these preliminary rules, the detailed transcripts of each child's verbalizations were assessed by Mary Main and me and predictions were made as to which attachment pattern each child would have exhibited in the Strange Situation at one-year of age. Our predictions were based upon our overall knowledge of the "internal working model" of children and adults who have been placed within these groups and sub-groups in studies of attachment to date. Recording my blind judgements from the first transcript forward, my overall hit-rate for placement in one of the four major infant classifications was 79%. The hit-rate expected by chance was 35%. (Kappa= .68, p. < .000).

Once we had recorded our judgement regarding the child's classification with mother, we informed ourselves regarding the actual classification and then used the feedback to develop directions for determining the model as it applies directly to the verbal responses to imagined separation situations in themselves. A preliminary version of the classification system developed by Mary Main and me was presented at the previous SRCD conference, (Kaplan and Main, 1985). At that time, we found that responses by children who had been secure, insecure-avoidant or insecure-disorganized in infancy could be readily distinguished into 3 groups based upon dimensions of rationality in combination with security. We called these three groups *secure-rational*, *insecure-rational* and *insecure-irrational*. Children who had been secure in infancy were called *secure-rational* because they gave reasonable or expected answers to the feel question and offered constructive solutions for what a child would do. Children who had been judged insecure-avoidant in infancy were called *insecure-rational* because they gave "rational" responses to what the pictured child would do, saying "sad" or "lonely", but seemed insecure in that they had little idea what the child could do. Finally, children who had been *disorganized* in infancy were described as *insecure-irrational* in their responses to the Separation Anxiety Test because they behaved irrationally in speech or behavior in various portions of the test.

Today I will present a revised and completed version of the Sixth-Year Separation Anxiety classification system.

Show slide 2 of preliminary group titles and current group titles

In this revised version I developed a sixth-year classification equivalent for the insecure-ambivalent group and criteria for sub-group classifications. I also changed the group titles to better describe the different patterns of children's responses. Upon closer scrutiny, the theme of rationality/irrationality was inaccurate as applied to the full sample. While children who were classified insecure-irrational were the most clearly irrational in their responses, some children who had been called insecure-rational could also be viewed as irrational in their responses to the test. Though not as extreme, children who were classified insecure-rational would also offer responses which were silly or bizarre.

The new group titles are: *secure-resourceful* (Group B), *insecure-inactive* (Group A), *insecure-ambivalent* (Group C), and *insecure-fearful/disorganized-disoriented* (Group D). Responses to imagined separation experiences in 6 year olds is thought to reflect in part a child's internal representations of the availability of his attachment figures. It is assumed that a child who has an image of his/her parents as responsive and accessible in times of need will offer secure and active responses to the separation situations while a child who has an image of his/her parents as lacking in responsiveness and accessibility will respond to the test in a variety of ways which suggest insecurity. The responses may indicate 1) an inability to cope with separation, 2) incompatible strategies for coping with separations, or 3) an overall fearfulness in response to separations.

The classification system was guided by the notion that a child with a secure pattern of response would be able to strike a balance between the capacity for self-reliance and attachment. This notion was strongly influenced by Bowlby's criteria for healthy functioning which is that a

person strike a balance between the capacity to seek help and rely on the support of others when need and an ability to take initiative and be self-reliant (1979). In Bowlby's view, those who suffer from psychiatric disturbances, whether psychoneurotic or sociopathic, have difficulties collaborating in rewarding relationships because of various forms of imbalance between self-reliance and attachment.

Once I had developed this revised system, I had a second judge (Nancy Silverman) classify these transcripts based exclusively on the classification instructions I developed. The second judge had no training transcripts, but was given feedback on the first 12 of the 50 cases. No feedback was given for the subsequent 38 transcripts. Agreement between this judge and myself across 50 cases was 76% (the percent agreement expected by chance would be 30%, Kappa= .66) which suggests that the system is quite reliable.

Show slide here of main groups

The slide shows that there was a significant relationship between Sixth-Year classifications and infant-attachment to mother. The hit-rate for this second judge was 68%. The percent agreement expected by chance would be 30% (Kappa= .54, p.< 0.000) Given that the second judge had no training transcripts, this hit-rate for placing children in one of four groups is impressive.

The next slide shows that no significant relationship was found between Sixth-Year Separation Anxiety Test classifications and infant attachment to father. The hit-rate was 26%. The percent agreement expected by chance would be 30% (Kappa= -.05, p. <.73).

Now I would like to describe the characteristics of secure-resourceful, insecure-inactive, insecure-ambivalent and insecure-fearful/disorganized-disoriented interview responses in detail. I will give illustrative examples throughout and point to the ways in which these patterns compare and contrast to infant attachment patterns in the Strange Situation.

I will begin by describing the general characteristics of the secure-resourceful pattern, focusing upon the responses of children who were classified B3, since they are prototypical of the secure-resourceful classification. I will then describe the three insecure patterns of response to the separation interview.

Children who had been classified secure with their mother in infancy were most often classified secure-resourceful in their response to imagined separations. They gave vulnerable responses to the feel question such as sad, lonely, afraid, *and* offered *constructive* solutions for what a child would do while the parents are away. They rarely did not know what the child would do, and offered *either* solutions which were active with respect to a need for attachment figures *or* social contact, or solutions which were independent but detailed and specific in content.

(Feels?) Sad, because they are going away. If he had permission to, he could follow them.

(Do?) Make sure that his Dad or Mom give him a phone number that he knows just in case if something goes wrong.

(Do?) He might, well, he might need someone to stay with him. Like if the car, like if the car has some batteries he might not know the store to get them. He might not know how much they cost. (Mm, so what is he gonna do?)...Well, he could go to his friend's house, and their mom- if their mom and dad are going out, he might just like ask them to see

if they would come with him.

In the Strange Situation, children are classified as secure when they show distress in response to separation and are able to obtain proximity and contact with the parent upon reunion. These children show little or no avoidance or resistance in response to the stress of the separation, but rather find ways to gain access to the parent once the parent returns. Once proximity and contact is achieved, the child is consoled and ready to resume exploration of the environment.

This ability to show distress in response to separations and do something active or attachment-related in response to their feelings corresponds to the pattern of response 6 year olds classified secure-resourceful show in response to imagined separation situations.

Children were also classified secure-resourceful when there was a presence of self in the responses which suggested that the child was personally involved in the task and took it seriously. These children frequently discussed themselves in relation to the pictured child's responses to the separation situations. There was a flexibility or an easy back and forth alternation between discussion themselves and the pictured child.

I'll tell you about this picture. I know cause when I started school at my first kindergarten class, boy I was just like this girl! (How?) I didn't realize anything. (You didn't realize anything?) I mean I just didn't want to go to school. At first, I was happy, but then I got sad (What about?) Well, I was gonna miss my mom and I just didn't know about school and couldn't go to kindergarten yet. (Mmm) This little girl feels sad. (Sad?) She's sad cause she doesn't really know everybody yet.

or

(Do?) Cry. (Cry?) Yeah, sometimes I cry.

In Main's study of the adult attachment interview, (Main, 1985; Main, Kaplan and Cassidy, 1985) she found the parents of secure infants autonomous with respect to attachment. There was a strong presence of "I" in the speech of these parents during the adult attachment interview as well an an apparent strong personal identity. This element of security can be seen again within the separation interview responses of these six-year old children.

Secure-resourceful children also appear more comfortable acknowledging feelings of anger in the imagined separations. The expressions of anger are always verbal, contained and specifically related to the separation situations.

(Do?) I think she's gonna cry. (Cry?) I think she's gonna stamp her feet when she goes out to play. (Stamp her feet?). Yes, cause she's mad.

or

(Feels?) A little angry at her mom and dad cause they're leaving her.

Anger though clearly present is not pervasive. It does not block access to the parents and it is not displaced onto other people or things, but rather is used directly and sometimes to gain access to attachment figures.

Secure-resourceful children also speak of more than one feeling at a time, and sometimes indicated an awareness of how feelings change depending on the situation e.g., "might be sad if he is left alone, but happy if friends are there". They may also indicate a respect for individual

differences, e.g., "*I* was happy the first day at school, but this girl might be sad; *all kids* are different" or (feels?) "sort of depends on what kind of people they are/ I have to *see* it in real life to judge".

Insecure-inactive pattern

Children who had been classified as insecure-avoidant with their mother in infancy were most often classified as insecure-inactive in response to imagined separations. Like secure-resourceful children, they offered vulnerable answers to how the pictured child may feel, saying "sad" and "lonely". What distinguished insecure-inactive children from children who were secure-resourceful was their inability to do anything in the face of attachment related feelings. They either repeatedly insist they do not know what the child could do about the separation, or give only low-level responses which are inactive with respect to an expression of a need for attachment figures and/or with respect to the undertaking of activities designed to make themselves independent, active and happy during the parents' absence.

(Feels?) Sad (high pitched voice) (Why?) He FEELS SAD!!! (Why?) Because his parents are leaving (whimpering voice) Oh God, he doesn't want to sleep all by himself! He's a crybaby. He doesn't want to sleep all by himself.

(Do?) Quack quack stay home, that's all.

(Feels?) He feels sad because he doesn't know if his mom will come back or his dad will come back.

(Do?) I don't know. (Do?) Oh, I don't know. (Don't know?) No.

What's the matter with that little girl? (Think something is wrong?) I don't think she feels very good at all (Feeling?) She's kinda feeling that she...she's never gonna see her friends again sort of.

(Do?) Nothing. (Nothing?) I don't know. (Do?) I don't know.

In the Strange Situation, infants are classified as avoidant when they respond minimally or not at all to separations, and when they actively avoid and ignore the attachment figure in the reunion episodes. To some extent, the responses of these children to the SAT echo their responses to the Strange Situation: the substantially passive solutions offered by these children in response to questions about what the pictured child would do still do not involve efforts to retrieve or get to the attachment figure. However these children who showed little distress or feeling during the Strange Situation, express the pictured child's *feelings* regarding separation as "sad" or "lonely". What distinguishes them from the "former B" children during the SAT, then, is their inability to picture the child as acting on these feelings.

This pattern of response shows that children who were classified as avoidant in infancy are not consistently detached with respect to attachment-related feelings. Quite the contrary. In this assessment, avoidant children show a pattern which is the opposite of the one exhibited in the Strange Situation: In the Strange Situation, avoidant children do not exhibit the expected attachment behavior upon reunion, but appear to have a reliable strategy for coping with the situation. In the context of the Separation Anxiety Test, avoidant children are quite undetached with respect to feelings about separation, but are at a loss as to how to cope with separations.

Insecure-ambivalent

Children who had been classified insecure-ambivalent with mother in infancy were most often classified as insecure-ambivalent in response to the imagined separations. Children are classified as anxious-ambivalent in the Strange Situation when they show marked preoccupation with the parent, marked distress upon separation, and mix strong proximity-seeking and contact-maintaining with angry resistant behavior toward the parent on reunion. What is most striking about these children in the Strange Situation is their intensity of focus upon the parent and their ambivalence towards the parent as evident in their combination of seeking and resisting contact with him or her. Otherwise, in their distress at separation and efforts to regain the parent, they resemble children who are securely attached.

Children who are classified insecure-ambivalent in their responses to the Separation Anxiety Test echo this infant pattern. Like children classified secure-resourceful, they offer reasonable answers to how the pictured child might feel, and offer solutions to cope with the separation situations but, like insecure-ambivalent infants, they combine strategies which are opposites or antithetical to one another. Some children behave in an extremely destructive aggressive way toward the parents which may block access to them and combine such responses with seeking contact with a caregiver.

(Do?) Shoot the gun at him. (Then what will happen?) Then he's gonna die (Who?) His dad.

or

(Do) Chase them (Who?) Mom and dad in his new toy car. (Then what?) And then he's gonna toss a bow and arrow and shoot them.

and later

(Do?) Kiss his mom.

Other children classified insecure-ambivalent combine overly sweet responses with passive-aggressive behavior directed toward the attachment figures:

(Do?) She might um wanna go pick some flowers so when her mom and dad are home, she could give them to them for a surprise.

and

(Do?) She might dress up and when the mom and dad come back they will be surprised they have no clothes...The kids have more clothes than the parents.

Children who are classified insecure-ambivalent may also combine strategies of dependence upon or closeness to a caregiver with independence or role reversal.

3 (Do?) Go sleep in with her aunt. (What else?) Call her parents and say are you having a good time?

or

(Feels?) Happy. (Why?) Because...um her mom and dad...are letting her sleep by herself...

(Do?) Go to her parents and say she's scared (Then what?) They are gonna come into her room and play with her.

Insecure-fearful/disorganized-disoriented

In the Strange Situation, infants are classified disorganized/disoriented when they show an array of disorganized/disoriented and sometimes seemingly undirected behaviors (Main and Solomon, 1986). More specifically, an infant is classified as disorganized/disoriented when he or she shows seemingly inexplicable behavior patterns such as freezing or stilling all movement for several seconds; hand-flapping and other stereotypies; approaching the parent with head averted; and running away from the parent and leaning head on wall when frightened.

Main and Hesse (in press) have found a relationship between infants classified disorganized/disoriented and parents' unresolved mourning of an attachment figure lost through death. In addition, there are some indications that unresolved experiences of physical abuse or sexual abuse by an attachment figure may also lead to the same second-generation outcome (Friedman, 1980).

At this point, only informal observations are available of the interactions between parents and infants classified disorganized/disoriented. Parents either give the infant the lead in the relationship to an unusual degree, seeming timid or deferential, or they behave in ways which appear somewhat threatening or frightening to the infant, i.e. sudden movements, unpredictable gestures, ominous changes in intonation in speech.

Main and Hesse (in press) hypothesize that such behaviors are inevitably disorganizing to the infant, because the infant is frightened by the parent's behavior, but the parent at such moments cannot be used as a secure base or a haven of safety . The behaviors shown by D infants under these circumstances are thought to reflect an experience of stress or fear and an inability to do anything in the face of it. Some D behaviors suggest fear directly i.e., leaning on the wall, hiding behind a chair, apprehensive movements such as hunched shoulders, tense posture. Other behaviors of infants classified disorganized/disoriented suggest fear indirectly in that their behavior is disorganized or disoriented. Direct indices of disorganization are exhibitions of contradictory behavior patterns such as proximity-seeking and avoidance simultaneously or in sequence. Direct indices of disorientation are exhibitions of marked stilling, freezing or aimless wandering for extended periods

of time.

In the Separation Anxiety Test, responses of children who were disorganized/disoriented during the Strange Situation echo this theme. The children seem afraid of something inexplicable and are unable to do anything about it. Fear may be reflected in a variety of ways. The child may imagine events which are explicitly fearful such as imagining that the attachment figure or child will be seriously hurt or killed

She's afraid. (Why is she afraid?) Her dad might die and then she'll be by herself. (Why is she afraid of that?) Because her mom died and if her mom died, she thinks that her dad might die.

or there may be deliberate or seemingly indeliberate blocking of access to the attachment figure through barriers.

(Do?) Probably gonna lock himself up. (Lock himself up?) Yeah, probably in his closet. (Then what will he do?) Probably kill himself.

There may be indirect indices of fear as well such as disorganization in thought or behavior or direct indices of disorientation. Some children remain verbally silent throughout the task. They seem unwilling or unable to speak in response to the queries. They frequently whisper their answers, shrug excessively or fall silent for long periods. These indices of disorientation echo the stilling and freezing behaviors observed in infants who are classified disorganized/disoriented in the Strange Situation.

Some children make subtle remarks during the interview, implying that certain actions occur

without an agent, that is things are done to them without knowing who the actor is. Such statements have an eerie quality, and suggest invisible actors who are unknown.

Children are also classified insecure-fearful/disorganized-disoriented when they respond to the stress of the task with thought processes that seem disorganized: for example, these children may say one thing and then the opposite without acknowledging a misunderstanding.

(Do?) Go buy some candy. (Go buy some candy?) Yes. (Will that make him feel better?) No. (What will make him feel better?) Having some candy.

Some children are classified as insecure-fearful/disorganized/disoriented, because they occasionally become behaviorally disorganized during the interview. They or may repeat the same word over and over again,

(Do?) Play. (Play?) Yeah, play play, play, play, play. (Just play?) Play, play, play, play, play.

or they may begin to talk in a nonsense language.

(Feels?) Are you kidding? No. (No?) She feels no. Wididididi, papapapa....geegeegee...

Other children suddenly become aggressive, hitting toys, kicking objects, or being mean to the examiner, etc.

(Do?) Sit in class and (C makes a stiff sad face) (Sit in class and look like that? How

come he feels sad?) (HIS FATHER IS GOING AWAY!!!(Hit's lions's head with each word).

(Feels?) Happy. (What's he happy about?) Cause he likes his grandfather coming. (Jumps on back of lion and hits it) Bad lion (hits it more) Bad lion!

Conclusion

I have given you an overview of a study which examines attachment in 6 year olds at the representational level. I have described to you the classification system that has been developed based solely on verbal observations and demonstrated that children who had been secure, insecure-avoidant, insecure-ambivalent and insecure-disorganized can readily be distinguished into groups best described as secure-resourceful, insecure-inactive, insecure-ambivalent and insecure-disorganized. I hope I have impressed upon you that the excitement of this longitudinal project is not simply in demonstrating the continuity of attachment patterns over a five year period, but rather in delineating what it is these patterns themselves seem to represent.

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